Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (previously presented) A method for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, said method comprising:

receiving information relating to an operation of a first subset of the plurality of network elements;

providing at least a portion of said received information to at least one analysis entity for analyzing said portion of received data and calculating updated control information based on such analysis, wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element;

receiving the updated control information calculated by the analysis entity; and

providing the updated control information to at least one of the network elements.

2. (previously presented) The method of claim 1, wherein the updated control information is a committed information rate value.

3. (previously presented) The method of claim 1 wherein the updated control information is an excess information rate value.

4. (previously presented) The method of claim 1 wherein said analysis entity is a policy engine operable to analyze said portion of said information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with predetermined criteria.

5. (previously presented) The method of claim 1 wherein the updated control information is a committed burst size value.

6. (previously presented) The method of claim 1 wherein the updated control information is an excess burst size value.

7-9. (cancelled)

10. (previously presented) The method of claim 1 wherein the control data is provided to a second subset of the plurality of network elements in response to the information.

11. (original) The method of claim 10 further comprising modifying the predefined criteria in response to the information.

12. (original) The method of claim 1 wherein the information is compiled by the first subset of network elements.

13. (original) The method of claim 1 wherein the information is received periodically.

E1 Cont.

14. (original) The method of claim 1 wherein the information is received aperiodically in response to changes in the operating parameter information associated with the first subset of network elements.

15. (previously presented) The method of claim 10 wherein the second subset of network elements comprises the first subset of network elements.

16. (previously presented) The method of claim 10 wherein the first subset of network elements comprises a first network element, and the second subset of network elements comprises a second network element.

17. (original) The method of claim 10 wherein the first and second network elements are part of a data transmission path, the second network element being upstream from the first network element, the operating parameters associated with the first network element representing data congestion in the first network element, the control data transmitted to the second network element controlling the second network element to thereby ameliorate the congestion in the first network element.

18. (previously presented) The method of claim 1 wherein receiving the information and providing the control data are performed by a single network controller.

19. (previously presented) The method of claim 1 wherein receiving the information and providing the control data are performed by a plurality of network controllers.

20-39. (cancelled)

40. (previously presented) An adaptive feedback system in a data network, the network including a plurality of network elements, at least one network element having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, the feedback system comprising:

one or more processors;

one or more memory, wherein at least one of the processors and memory are adapted to:

receive information relating to an operation of a first subset of the plurality of network elements;

provide at least a portion of said received information to at least one analysis entity for analyzing said portion of received data and calculating updated control information based on such analysis, wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element;

receive the updated control information calculated by the analysis entity; and

provide the updated control information to at least one of the network elements.

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41. (previously presented) The adaptive feedback system of claim 40, wherein the updated control information is a committed information rate value.

42. (previously presented) The adaptive feedback system of claim 40, wherein the updated control information is an excess information rate value.

43. (previously presented) The adaptive feedback system of claim 40, wherein the updated control information is a committed burst size value.

44. (previously presented) The adaptive feedback system of claim 40, wherein the updated control information is an excess burst size value.

45. (previously presented) The adaptive feedback system of claim 40, wherein said analysis entity is a policy engine operable to analyze said portion of said information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with predetermined criteria.

46. (previously presented) The adaptive feedback system of claim 40 further comprising the analysis entity.

47. (previously presented) A computer program product for handling data transmitted within a computer network, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product configured to:

receive information relating to an operation of a first subset of the plurality of network elements;

provide at least a portion of said received information to at least one analysis entity for analyzing said portion of received data and calculating updated control information based on such analysis, wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element;

receive the updated control information calculated by the analysis entity; and

provide the updated control information to at least one of the network elements.

48. (previously presented) The computer program product of claim 47, wherein the updated control information is a committed information rate value.

49. (previously presented) The computer program product of claim 47, wherein the updated control information is an excess information rate value.

50. (previously presented) The computer program product of claim 47, wherein the updated control information is a committed burst size value.

51. (previously presented) The computer program product of claim 47, wherein the updated control information is an excess burst size value.

52. (previously presented) The computer program product of claim 47, wherein said analysis entity is a policy engine operable to analyze said portion of said information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with predetermined criteria.

53. (previously presented) An apparatus for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, the apparatus comprising:

means for receiving information relating to an operation of a first subset of the plurality of network elements;

means for providing at least a portion of said received information to at least one analysis entity for analyzing said portion of received data and calculating updated control information based on such analysis, wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element;

means for receiving the updated control information calculated by the analysis entity; and

means for providing updated control information to at least one of the network elements.

54. (new) The method of claim 1 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reconfiguration of at least one operating parameter of the network element.

55. (new) The method of claim 1 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reprovisioning of at least one parameter of a link associated with the network element.

56. (new) The system of claim 40 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reconfiguration of at least one operating parameter of the network element.

57. (new) The system of claim 40 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reprovisioning of at least one parameter of a link associated with the network element.

58. (new) The computer program product of claim 47 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reconfiguration of at least one operating parameter of the network element.

E1 Cont.

59. (new) The computer program product of claim 47 wherein the updated control information specifies an adjustment amount to a control parameter of the at least one network element to thereby effect dynamic reprovisioning of at least one parameter of a link associated with the network element.